

## SEQUENCE LISTING

<110> EMBL

<120> Crystals of an Aurora-A TPX2 Complex, TPX2 binding site of Aurora-A, Aurora-A ligands and their use

<130> M/44278-PCT

<150> EP 03023136.9

<151> 2003-10-10

<160> 11

<170> PatentIn version 3.1

<210> 1

<211> 43

<212> PRT

<213> Homo sapiens

<400> 1

Met Ser Gln Val Lys Ser Ser Tyr Ser Tyr Asp Ala Pro Ser Asp Phe  
1 5 10 15

Ile Asn Phe Ser Ser Leu Asp Asp Glu Gly Asp Thr Gln Asn Ile Asp  
20 25 30

Ser Trp Phe Glu Glu Lys Ala Asn Leu Glu Asn  
35 40

<210> 2

<211> 39

<212> PRT

<213> Xenopus sp.

<400> 2

Met Glu Asp Thr Gln Asp Thr Tyr Ser Tyr Asp Ala Pro Ser Ile Phe  
1 5 10 15

Asn Phe Ser Ser Phe His Glu Asp His Asn Ala Asp Ser Trp Phe Asp  
20 25 30

Gln Val Thr Asn Ala Glu Asn  
35

<210> 3

<211> 45

<212> PRT

<213> Fugu rubripes

<400> 3

Met Ala Glu Ser Asn Phe Asp Ala Asp Ala Glu Leu Tyr Glu Tyr Asp  
1 5 10 15

Ala Pro Ser Glu Val Val Asp Leu Lys Glu Leu Gln Asp Val Glu Gly  
 20 25 30

Asp Asp Lys Trp Phe Glu Glu Gln Ala Leu Gly Val Asp  
 35 40 45

<210> 4  
 <211> 282  
 <212> PRT  
 <213> Homo sapiens

<400> 4

Glu Ser Lys Lys Arg Gln Trp Ala Leu Glu Asp Phe Glu Ile Gly Arg  
 1 5 10 15

Pro Leu Gly Lys Gly Lys Phe Gly Asn Val Tyr Leu Ala Arg Glu Lys  
 20 25 30

Gln Ser Lys Phe Ile Leu Ala Leu Lys Val Leu Phe Lys Ala Gln Leu  
 35 40 45

Glu Lys Ala Gly Val Glu His Gln Leu Arg Arg Glu Val Glu Ile Gln  
 50 55 60

Ser His Leu Arg His Pro Asn Ile Leu Arg Leu Tyr Gly Tyr Phe His  
 65 70 75 80

Asp Ala Thr Arg Val Tyr Leu Ile Leu Glu Tyr Ala Pro Leu Gly Thr  
 85 90 95

Val Tyr Arg Glu Leu Gln Lys Leu Ser Lys Phe Asp Glu Gln Arg Thr  
 100 105 110

Ala Thr Tyr Ile Thr Glu Leu Ala Asn Ala Leu Ser Tyr Cys His Ser  
 115 120 125

Lys Arg Val Ile His Arg Asp Ile Lys Pro Glu Asn Leu Leu Leu Gly  
 130 135 140

Ser Ala Gly Glu Leu Lys Ile Ala Asp Phe Gly Trp Ser Val His Ala  
 145 150 155 160

Pro Ser Ser Arg Arg Thr Thr Leu Cys Gly Thr Leu Asp Tyr Leu Pro  
 165 170 175

Pro Glu Met Ile Glu Gly Arg Met His Asp Glu Lys Val Asp Leu Trp  
 180 185 190

Ser Leu Gly Val Leu Cys Tyr Glu Phe Leu Val Gly Lys Pro Pro Phe  
 195 200 205

Glu Ala Asn Thr Tyr Gln Glu Thr Tyr Lys Arg Ile Ser Arg Val Glu  
 210 215 220

Phe Thr Phe Pro Asp Phe Val Thr Glu Gly Ala Arg Asp Leu Ile Ser  
 225 230 235 240

Arg Leu Leu Lys His Asn Pro Ser Gln Arg Pro Met Leu Arg Glu Val  
 245 250 255

Leu Glu His Pro Trp Ile Thr Ala Asn Ser Ser Lys Pro Ser Asn Cys  
 260 265 270

Gln Asn Lys Glu Ser Ala Ser Lys Gln Ser  
 275 280

<210> 5  
 <211> 279  
 <212> PRT  
 <213> Xenopus sp.

<400> 5

Glu Gly Lys Lys Lys Gln Trp Cys Leu Glu Asp Phe Glu Ile Gly Arg  
 1 5 10 15

Pro Leu Gly Lys Gly Lys Phe Gly Asn Val Tyr Leu Ala Arg Glu Arg  
 20 25 30

Glu Ser Lys Phe Ile Leu Ala Leu Lys Val Leu Phe Lys Ser Gln Leu  
 35 40 45

Glu Lys Ala Gly Val Glu His Gln Leu Arg Arg Glu Val Glu Ile Gln  
 50 55 60

Ser His Leu Arg His Pro Asn Ile Leu Arg Leu Tyr Gly Tyr Phe His  
 65 70 75 80

Asp Ala Ser Arg Val Tyr Leu Ile Leu Asp Tyr Ala Pro Gly Gly Glu  
 85 90 95

Leu Phe Arg Glu Leu Gln Lys Cys Thr Arg Phe Asp Asp Gln Arg Ser  
 100 105 110

Ala Met Tyr Ile Lys Gln Leu Ala Glu Ala Leu Leu Tyr Cys His Ser  
 115 120 125

Lys Lys Val Ile His Arg Asp Ile Lys Pro Glu Asn Leu Leu Leu Gly  
 130 135 140

Ser Asn Gly Glu Leu Lys Ile Ala Asp Phe Gly Trp Ser Val His Ala  
 145 150 155 160

Pro Ser Ser Arg Arg Thr Thr Leu Cys Gly Thr Leu Asp Tyr Leu Pro  
 165 170 175

Pro Glu Met Ile Glu Gly Arg Met His Asp Glu Thr Val Asp Leu Trp  
 180 185 190

Ser Leu Gly Val Leu Cys Tyr Glu Phe Leu Val Gly Lys Pro Pro Phe  
 195 200 205

Glu Thr Asp Thr His Gln Glu Thr Tyr Arg Arg Ile Ser Lys Val Glu  
 210 215 220

Phe Gln Tyr Pro Pro Tyr Val Ser Glu Glu Ala Arg Asp Leu Val Ser  
 225 230 235 240

Lys Leu Leu Lys His Asn Pro Asn His Arg Leu Pro Leu Lys Gly Val  
 245 250 255

Leu Glu His Pro Trp Ile Ile Lys Asn Ser Gln Leu Lys Lys Lys Asp  
 260 265 270

Glu Pro Leu Pro Gly Ala Gln  
 275

<210> 6

<211> 267

<212> PRT

<213> Fugu rubripes

<400> 6

Arg Arg Arg Trp Ser Leu Glu Asn Phe Asp Ile Gly Arg Pro Leu Gly  
 1 5 10 15

Lys Gly Lys Phe Gly Asn Val Tyr Leu Ala Arg Glu Arg Gln Ser Arg  
 20 25 30

Phe Ile Leu Ala Leu Lys Val Leu Phe Lys Lys Gln Leu Glu Lys Ala  
 35 40 45

Gly Val Glu His Gln Leu Arg Arg Glu Val Glu Ile Gln Ser His Leu  
 50 55 60

Arg His Pro Asn Ile Leu Arg Leu Tyr Gly Tyr Phe His Asp Pro Ser  
65 70 75 80

Arg Val Tyr Leu Ile Leu Glu Phe Ala Pro Lys Gly Glu Leu Tyr Gly  
85 90 95

Glu Leu Gln Arg Cys Gly Ser Phe Pro Glu Glu Arg Ser Ala Thr Tyr  
100 105 110

Ile Met Glu Leu Ala Asp Ala Leu Asn Tyr Cys His Ser Lys Lys Val  
115 120 125

Ile His Arg Asp Ile Lys Pro Glu Asn Leu Leu Leu Gly Ala Asn Gly  
130 135 140

Glu Leu Lys Ile Ala Asp Phe Gly Trp Ser Val His Thr Pro Ser Ser  
145 150 155 160

Arg Arg Ser Thr Leu Cys Gly Thr Leu Asp Tyr Leu Pro Pro Glu Met  
165 170 175

Ile Glu Gly Lys Thr His Asp Glu Lys Val Asp Leu Trp Ser Leu Gly  
180 185 190

Val Leu Cys Tyr Glu Phe Leu Val Gly Lys Pro Pro Phe Glu Ala Lys  
195 200 205

Thr His Glu Glu Thr Tyr Arg Arg Ile Ser Arg Val Glu Tyr Thr Tyr  
210 215 220

Pro Ala His Thr Asn Ile Ser Asp Gly Ala Lys Asp Leu Val Ser Arg  
225 230 235 240

Leu Leu Lys His Asn Pro Met Gln Arg Leu Pro Val Gln Gly Val Leu  
245 250 255

Ala His Pro Trp Val Val Glu Arg Ser Thr Lys  
260 265

<210> 7

<211> 269

<212> PRT

<213> Drosophila sp.

<400> 7

Gln Lys Pro Lys Lys Thr Trp Glu Leu Asn Asn Phe Asp Ile Gly Arg  
1 5 10 15

Leu Leu Gly Arg Gly Lys Phe Gly Asn Val Tyr Leu Ala Arg Glu Lys  
                   20                  25                  30

Glu Ser Gln Phe Val Val Ala Leu Lys Val Leu Phe Lys Arg Gln Ile  
                   35                  40                  45

Gly Glu Ser Asn Val Glu His Gln Val Arg Arg Glu Ile Glu Ile Gln  
           50                  55                  60

Ser His Leu Arg His Pro His Ile Leu Arg Leu Tyr Ala Tyr Phe His  
 65                  70                  75                  80

Asp Asp Val Arg Ile Tyr Leu Ile Leu Glu Tyr Ala Pro Gln Gly Thr  
                   85                  90                  95

Leu Phe Asn Ala Leu Gln Ala Gln Pro Met Lys Arg Phe Asp Glu Arg  
                   100                  105                  110

Gln Ser Ala Thr Tyr Ile Gln Ala Leu Cys Ser Ala Leu Leu Tyr Leu  
                   115                  120                  125

His Glu Arg Asp Ile Ile His Arg Asp Ile Lys Pro Glu Asn Leu Leu  
           130                  135                  140

Leu Gly His Lys Gly Val Leu Lys Ile Ala Asp Phe Gly Trp Ser Val  
 145                  150                  155                  160

His Glu Pro Asn Ser Met Arg Met Thr Leu Cys Gly Thr Val Asp Tyr  
                   165                  170                  175

Leu Pro Pro Glu Met Val Gln Gly Lys Pro His Thr Lys Asn Val Asp  
                   180                  185                  190

Leu Trp Ser Leu Gly Val Leu Cys Phe Glu Leu Leu Val Gly His Ala  
           195                  200                  205

Pro Phe Tyr Ser Lys Asn Tyr Asp Glu Thr Tyr Lys Lys Ile Leu Lys  
           210                  215                  220

Val Asp Tyr Lys Leu Pro Glu His Ile Ser Lys Ala Ala Ser His Leu  
 225                  230                  235                  240

Ile Ser Lys Leu Leu Val Leu Asn Pro Gln His Arg Leu Pro Leu Asp  
                   245                  250                  255

Gln Val Met Val His Pro Trp Ile Leu Ala His Thr Gln

260

265

<210> 8  
 <211> 284  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 8

Ala Arg Glu Glu Ser Cys Trp Ser Leu Asp Asp Phe Asp Val Gly Arg  
 1 5 10 15

Pro Leu Gly Lys Gly Lys Phe Gly Asn Val Phe Ile Ser Arg Glu Lys  
 20 25 30

Lys Thr Lys Arg Ile Ile Ala Leu Lys Val Leu Phe Lys Thr Gln Leu  
 35 40 45

Leu Gln Leu Gly Val Ser His Gln Leu Lys Arg Glu Ile Glu Ile Gln  
 50 55 60

Tyr His Leu Arg His Pro Asn Ile Leu Thr Leu Tyr Gly Tyr Phe His  
 65 70 75 80

Asp Asp Lys Arg Val Phe Val Ile Leu Asp Tyr Ala Ser Arg Gly Glu  
 85 90 95

Leu Phe Asn Val Leu Gln Ser Gln Pro Gly His Lys Val Asn Glu Val  
 100 105 110

Ile Ala Gly Arg Phe Val Arg Gln Leu Ala Asn Ala Leu His Tyr Cys  
 115 120 125

His Ser Lys Gly Val Ile His Arg Asp Ile Lys Pro Glu Asn Leu Leu  
 130 135 140

Leu Asp Ser Lys Leu Asn Leu Lys Leu Ala Asp Phe Gly Trp Ser Val  
 145 150 155 160

Val Ala Asp His Ser Lys Arg His Thr Leu Cys Gly Thr Met Asp Tyr  
 165 170 175

Leu Ala Pro Glu Met Val Ser Asn Gln Pro His Asp Phe Asn Val Asp  
 180 185 190

Ile Trp Ala Ile Gly Ile Leu Leu Phe Glu Met Leu Val Gly Tyr Ala  
 195 200 205

Pro Phe Ala Asn Gln Thr Gly Asp Lys Leu Ile Ala Arg Ile Lys Glu

210

215

220

Cys Lys Ile Tyr Ile Pro Ser Val Val Thr Asp Gly Ala Ala Ser Leu  
 225 230 235 240

Ile Asn Ala Ile Ile Lys Lys Glu Pro Gln Glu Arg Leu Pro Leu Val  
 245 250 255

Asp Ile Met Ala His Pro Trp Ile Lys Glu Met Lys Gln Arg Glu Asp  
 260 265 270

Ile Glu Val Pro Leu Phe Ile Ser Thr Leu Thr Lys  
 275 280

<210> 9  
 <211> 279  
 <212> PRT  
 <213> Homo sapiens

<400> 9

Asp Ile Leu Thr Arg His Phe Thr Ile Asp Asp Phe Glu Ile Gly Arg  
 1 5 10 15

Pro Leu Gly Lys Gly Lys Phe Gly Asn Val Tyr Leu Ala Arg Glu Lys  
 20 25 30

Lys Ser His Phe Ile Val Ala Leu Lys Val Leu Phe Lys Ser Gln Ile  
 35 40 45

Glu Lys Glu Gly Val Glu His Gln Leu Arg Arg Glu Ile Glu Ile Gln  
 50 55 60

Ala His Leu His His Pro Asn Ile Leu Arg Leu Tyr Asn Tyr Phe Tyr  
 65 70 75 80

Asp Arg Arg Arg Ile Tyr Leu Ile Leu Glu Tyr Ala Pro Arg Gly Glu  
 85 90 95

Leu Tyr Lys Glu Leu Gln Lys Ser Cys Thr Phe Asp Glu Gln Arg Thr  
 100 105 110

Ala Thr Ile Met Glu Glu Leu Ala Asp Ala Leu Met Tyr Cys His Gly  
 115 120 125

Lys Lys Val Ile His Arg Asp Ile Lys Pro Glu Asn Leu Leu Leu Gly  
 130 135 140

Leu Lys Gly Glu Leu Lys Ile Ala Asp Phe Gly Trp Ser Val His Ala



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145                      150                      155                      160  
 Pro Ser Leu Arg Arg Lys Thr Met Cys Gly Thr Leu Asp Tyr Leu Pro  
                                  165                      170                      175  
 Pro Glu Met Ile Glu Gly Arg Met His Asn Glu Lys Val Asp Leu Trp  
                                  180                      185                      190  
 Cys Ile Gly Val Leu Cys Tyr Glu Leu Leu Val Gly Asn Pro Pro Phe  
                                  195                      200                      205  
 Glu Ser Ala Ser His Asn Glu Thr Tyr Arg Arg Ile Val Lys Val Asp  
                                  210                      215                      220  
 Leu Lys Phe Pro Ala Ser Val Pro Thr Gly Ala Gln Asp Leu Ile Ser  
                                  225                      230                      235                      240  
 Lys Leu Leu Arg His Asn Pro Ser Glu Arg Leu Pro Leu Ala Gln Val  
                                  245                      250                      255  
 Ser Ala His Pro Trp Val Arg Ala Asn Ser Arg Arg Val Leu Pro Pro  
                                  260                      265                      270  
 Ser Ala Leu Gln Ser Val Ala  
                                  275  
 <210> 10  
 <211> 280  
 <212> PRT  
 <213> Xenopus sp.  
 <400> 10  
 Glu Met Pro Lys Arg Lys Phe Thr Ile Asp Asp Phe Asp Ile Gly Arg  
 1                      5                      10                      15  
 Pro Leu Gly Lys Gly Lys Phe Gly Asn Val Tyr Leu Ala Arg Glu Lys  
                                  20                      25                      30  
 Gln Asn Lys Phe Ile Met Ala Leu Lys Val Leu Phe Lys Ser Gln Leu  
                                  35                      40                      45  
 Glu Lys Glu Gly Val Glu His Gln Leu Arg Arg Glu Ile Glu Ile Gln  
                                  50                      55                      60  
 Ser His Leu Arg His Pro Asn Ile Leu Arg Met Tyr Asn Tyr Phe His  
 65                      70                      75                      80  
 Asp Arg Lys Arg Ile Tyr Leu Met Leu Glu Phe Ala Pro Arg Gly Glu

10/12

85	90	95
Leu Tyr Lys Glu Leu Gln Lys His Gly Arg Phe Asp Glu Gln Arg Ser 100 105 110		
Ala Thr Phe Met Glu Glu Leu Ala Asp Ala Leu His Tyr Cys His Glu 115 120 125		
Arg Lys Val Ile His Arg Asp Ile Lys Pro Glu Asn Leu Leu Met Gly 130 135 140		
Tyr Lys Gly Glu Leu Lys Ile Ala Asp Phe Gly Trp Ser Val His Ala 145 150 155 160		
Pro Ser Leu Arg Arg Arg Thr Met Cys Gly Thr Leu Asp Tyr Leu Pro 165 170 175		
Pro Glu Met Ile Glu Gly Lys Thr His Asp Glu Lys Val Asp Leu Trp 180 185 190		
Cys Ala Gly Val Leu Cys Tyr Glu Phe Leu Val Gly Met Pro Pro Phe 195 200 205		
Asp Ser Pro Ser His Thr Glu Thr His Arg Arg Ile Val Asn Val Asp 210 215 220		
Leu Lys Phe Pro Pro Phe Leu Ser Asp Gly Ser Lys Asp Leu Ile Ser 225 230 235 240		
Lys Leu Leu Arg Tyr His Pro Pro Gln Arg Leu Pro Leu Lys Gly Val 245 250 255		
Met Glu His Pro Trp Val Lys Ala Asn Ser Arg Arg Val Leu Pro Pro 260 265 270		
Val Tyr Gln Ser Thr Gln Ser Lys 275 280		

<210> 11  
 <211> 286  
 <212> PRT  
 <213> Unknown

<220>  
 <223> Vertebrate cAPK

<400> 11

Thr Pro Ser Gln Asn Thr Ala Gln Leu Asp Gln Phe Asp Arg Ile Lys
1 5 10 15

Thr Leu Gly Thr Gly Ser Phe Gly Arg Val Met Leu Val Lys His Lys  
20 25 30

Glu Ser Gly Asn His Tyr Ala Met Lys Ile Leu Asp Lys Gln Lys Val  
35 40 45

Val Lys Leu Lys Gln Ile Glu His Thr Leu Asn Glu Lys Arg Ile Leu  
50 55 60

Gln Ala Val Asn Phe Pro Phe Leu Val Lys Leu Glu Phe Ser Phe Lys  
65 70 75 80

Asp Asn Ser Asn Leu Tyr Met Val Met Glu Tyr Val Ala Gly Gly Glu  
85 90 95

Met Phe Ser His Leu Arg Arg Ile Gly Arg Phe Ser Glu Pro His Ala  
100 105 110

Arg Phe Tyr Ala Ala Gln Ile Val Leu Thr Phe Glu Tyr Leu His Ser  
115 120 125

Leu Asp Leu Ile Tyr Arg Asp Leu Lys Pro Glu Asn Leu Leu Ile Asp  
130 135 140

Gln Gln Gly Tyr Ile Gln Val Thr Asp Phe Gly Phe Ala Lys Arg Val  
145 150 155 160

Lys Gly Arg Thr Trp Thr Leu Cys Gly Thr Pro Glu Tyr Leu Ala Pro  
165 170 175

Glu Ile Ile Leu Ser Lys Gly Tyr Asn Lys Ala Val Asp Trp Trp Ala  
180 185 190

Leu Gly Val Leu Ile Tyr Glu Met Ala Ala Gly Tyr Pro Pro Phe Phe  
195 200 205

Ala Asp Glu Pro Ile Gln Ile Tyr Glu Lys Ile Val Ser Gly Lys Val  
210 215 220

Arg Phe Pro Ser His Phe Ser Ser Asp Leu Lys Asp Leu Leu Arg Asn  
225 230 235 240

Leu Leu Gln Val Asp Leu Thr Lys Arg Phe Gly Asn Leu Lys Asn Gly  
245 250 255

Val Asn Asp Ile Lys Asn His Lys Trp Phe Ala Thr Thr Asp Trp Ile

260

265

270

Ala Ile Tyr Gln Arg Lys Val Glu Ala Pro Phe Ile Pro Lys  
275 280 285